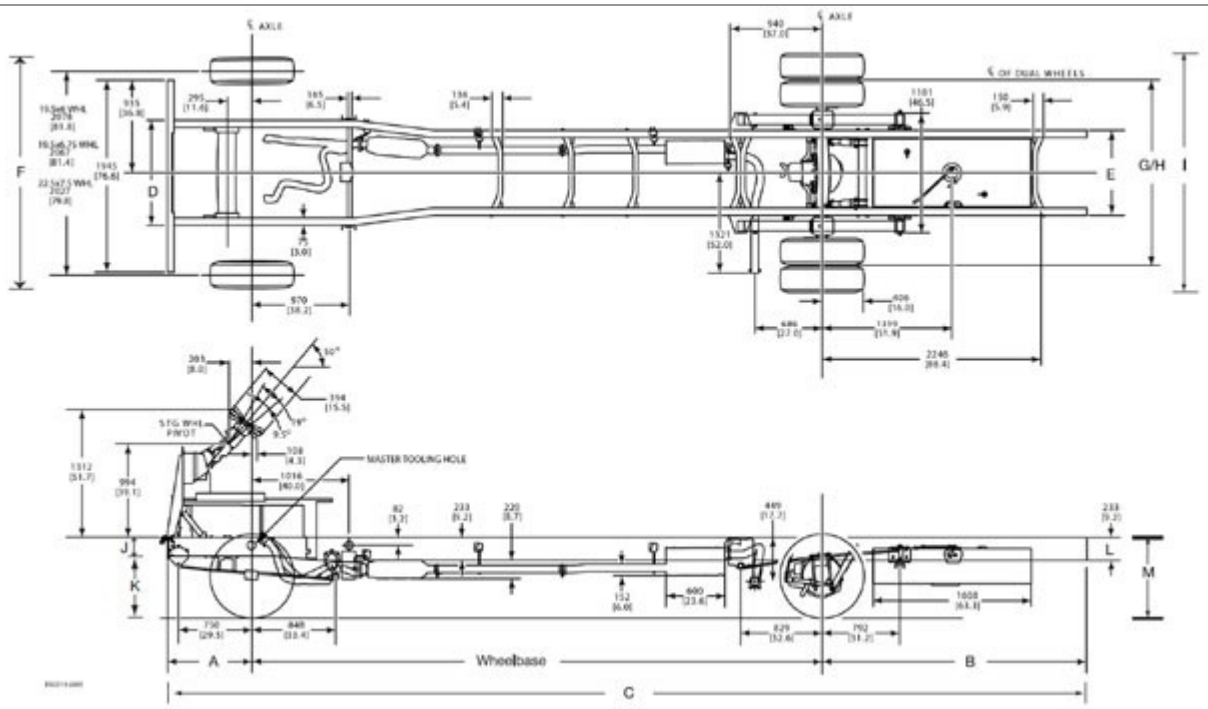
2020 F53 Motorhome Specifications

Dimensions



GVWR (lbs.)		16,000	16,000	16,000	18,000	18,000	18,000	18,000	20,500	20,500
Wheelbase (in.)		158	178	190	178	190	208	228	208	228
Code	Description (in.)									
A	Front Overhang	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3
B	Rear Overhang	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8
C	Overall Length	300.1	320.1	332.1	320.1	332.1	350.1	370.1	350.1	370.1
D	Front Frame Width	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9
E	Rear Frame Width	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
F	Tire Outside Width (Front)	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6
G	Tire Outside Width (Rear Inner)	72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8	72.8
H	Tire Center Width (Rear)	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0

I	Tire Outside Width (Rear Outer)	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4	95.4
J	Frame Front Section Height	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
K	Frame Height @ Front Wheel[(1)]	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.3	28.3
L	Frame Rear Section Height	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
M	Frame Height @ Rear Axle[(1)]	30.3	30.3	30.3	30.3	30.3	30.3	30.3	30.7	30.7

GVWR (lbs.)		**22,000**	**22,000**	**22,000**	**24,000**	**24,000**	**24,000**	**26,000**	**26,000**	**26,000**
Wheelbase (in.)		**208**	**228**	**242**	**228**	**242**	**252**	**228**	**242**	**252**
Code	**Description (in.)**									
A	Front Overhang	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3	36.3
B	Rear Overhang	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8	105.8
C	Overall Length	350.1	370.1	384.1	370.1	384.1	394.1	370.1	384.1	394.1
D	Front Frame Width	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9	41.9
E	Rear Frame Width	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0	34.0
F	Tire Outside Width (Front)	90.7	90.7	90.7	92.7	92.7	92.7	92.7	92.7	92.7
G	Tire Outside Width (Rear Inner)	70.3	70.3	70.3	70.2	70.2	70.2	70.2	70.2	70.2
H	Tire Center Width (Rear)	72.8	72.8	72.8	71.9	71.9	71.9	71.9	71.9	71.9
I	Tire Outside Width (Rear Outer)	95.4	95.4	95.4	95.2	95.2	95.2	95.2	95.2	95.2

J	Frame Front Section Height	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
K	Frame Height @ Front Axle(1)	30.5	30.5	30.5	31.2	31.2	31.2	31.2	31.2	31.2
L	Frame Rear Section Height	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
M	Frame Height @ Rear Axle(1)	30.7	30.7	32.9	33.9	33.9	33.9	33.9	33.9	33.9

(1) Dimensions are for reference only. Actual heights may vary due to product tolerances.

2020 F53 Motorhome Specifications

Weight Ratings

F53 Class A Motorhome Chassis — GVWR/Payload/GCWR & Trailer Weight/GAWR/Base Curb Weight

Drive/WB (in.)	Engine/ Trans.	Maximum GVWR (lbs.)	Maximum Payload (lbs.)(1)	Maximum GCWR/Trailer Weight (lbs.)	GAWR (lbs.)(2)		Base Curb Weight (lbs.)(3)		
					Front	Rear	Front	Rear	Total
4x2 — 158	7.3L/Auto	16,000	9,690	23,000/7,000	6,500	11,000	3,088	3,219	6,307
4x2 — 178	7.3L/Auto	16,000	9,670	23,000/7,000	6,500	11,000	3,109	3,221	6,330
	7.3L/Auto	18,000	11,630	23,000/5,000	7,000	12,000	3,122	3,240	6,362
4x2 — 190	7.3L/Auto	16,000	9,650	23,000/7,000	6,500	11,000	3,111	3,232	6,343
	7.3L/Auto	18,000	11,590	23,000/5,000	7,000	12,000	3,176	3,227	6,403
4x2 — 208	7.3L/Auto	18,000	11,530	23,000/5,000	7,000	12,000	3,223	3,241	6,464
	7.3L/Auto	20,500	13,970	26,000/5,500	7,000(4)	13,500	3,259	3,271	6,530
	7.3L/Auto	22,000	15,300	26,000/4,000	8,000	15,000	3,289	3,410	6,699
4x2 — 228	7.3L/Auto	18,000	11,460	23,000/5,000	7,000	12,000	3,275	3,257	6,532
	7.3L/Auto	20,500	13,900	26,000/5,500	7,000(4)	13,500	3,311	3,287	6,598
	7.3L/Auto	22,000	15,210	26,000/4,000	8,000	15,000	3,348	3,437	6,785
	7.3L/Auto	24,000	16,730	30,000/6,000	9,000	15,500	3,500	3,767	7,267
	7.3L/Auto	26,000	18,720	30,000/4,000	9,000	17,500	3,500	3,779	7,279
4x2 — 242	7.3L/Auto	22,000	15,140	26,000/4,000	8,000	15,000	3,390	3,462	6,852
	7.3L/Auto	24,000	16,660	30,000/6,000	9,000	15,500	3,542	3,792	7,334
	7.3L/Auto	26,000	18,650	30,000/4,000	9,000	17,500	3,542	3,804	7,346
4x2 — 252	7.3L/Auto	24,000	16,610	30,000/6,000	9,000	15,500	3,555	3,826	7,381
	7.3L/Auto	26,000	18,600	30,000/4,000	9,000	17,500	3,572	3,822	7,394

(1) Load rating represents maximum allowable weight of people, cargo and body equipment and is reduced by optional equipment weight.

(2) Gross axle weight rating is determined by the rated capacity of the minimum component of the axle system (axle, springs, wheels, tires) of a specific vehicle. Front and rear GAWRs will, in all cases, sum to a number equal to or greater than the GVWR for the particular vehicle. Maximum loaded vehicle (including passengers, equipment and payload) cannot exceed the GVW rating or GAWR (front or rear).

(3) Base Curb Weights shown above consider the strip chassis weight with standard equipment, full fuel tank and all other fluids filled to capacity. Optional equipment weights are in pounds as follows: (Front/Total): 19.5" x 6.75" Tires and Wheels (available with 22,000-lb. GVWR only) (-39/-76); Track Bar Heavy-Duty Front Suspension (available with 16,000-lb. GVWR only) (32/32).

(4) 20.5K GVWR Upgrade Package (20R) includes optional 7,500-lb. FGAWR (68R).

NOTE: Refer to Standard Equipment for Standard Powertrain/Chassis Equipment Specifications.

2020 F53 Motorhome Specifications

Standard Powertrain/Chassis Equipment Specifications

Drive:		4x2
POWERTRAIN:		
Engine	Application	50 states
	Type	7.3L PFI gas V8 (gas engine, includes cooler)
Transmission	Type	TorqShift HD 6-speed with tow/haul mode
	Speeds	6-speed overdrive
AXLES:		
Front Axle	Type	Forged I-beam
	Capacity (rating @ ground)	6,500 and 7,000 lbs. (16,000-/18,000-/20,500-lb. GVWR), 7,500 lbs. (20,500-lb. GVWR option), 8,000 lbs. (22,000-lb. GVWR), 9,000 lbs. (24,000-/26,000-lb. GVWR)
	King pin angle	5.5º (16,000-lb., 22,000-lb. GVWR); 6.5º (24,000-lb., 26,000-lb. GVWR)
	Caster angle	4.6º (16,000-lb., 22,000-lb. GVWR); 4.25º (24,000-lb., 26,000-lb. GVWR)
Rear Axle	Type — Full-floating	Full-floating, Dana
	Capacity (rating @ ground)	11,000 lbs. (16,000-lb. GVWR), 12,000 lbs. (16,000- to 18,000-lb. GVWR), 13,500 lbs. (20,500-lb. GVWR), 15,000 lbs. (22,000-lb. GVWR), 17,500 lbs. (24,000 - 26,000-lb. GVWR)
	Axle ratio	4.88 (16,000-lb. GVWR); 4.88 (18,000-lb. GVWR); 5.86 (20,500-lb. and 22,000-lb. GVWR); 6.14 (24,000-lb. and 26,000-lb. GVWR)
BRAKES:		
Front/Rear Disc	Type	Dual piston pin slider calipers, bolt-on adapters, wraparound tie bars (Exc. 66 Rear)
	Rotor diameter—front/fear	15.0" (16,000-lb. to 22,000-lb. GVWR) 15.0" (24,000-lb., 26,000-lb. GVWR)
Power Assist Unit	Type	Hydro Boost, 8.19 boost ratio (16,000-lb., 18,000-lb. GVWR); Hydro Max, 21.1 boost ratio (20,500-lb. to 26,000-lb. GVWR)
Anti-lock System		4-wheel, 4-sensor/4-channel (16,000-lb., 18,000-lb. GVWR); 4-sensor/ 4-channel (20,500-lb. to 26,000-lb. GVWR)
Parking Brake (Driveline Drum)		Foot-operated, hand release
ELECTRICAL:		
Alternator	Rating	210 amperes, 2,832 watts[(1)]
Battery	Type	Maintenance-free
	Rating	78 amp-hr., 750 CCA
EXHAUST SYSTEM:	Type	L.H. forward-of-rear-axle exhaust exit
FUEL TANK:	Location/capacity	Aft-of-rear-axle (left-hand side fuel fill)/80.0 gal. (302.8 L)
STEERING:	Type	Power, TRW, TAS 40 gear (includes cooler) (16,000-lb.–22,000-lb. GVWR) TAS 55 (24,000-lb. to 26,000-lb. GVWR)
	Ratio	18.4:1 (16,000-lb. to 26,000-lb. GVWR)
	Wheel	17.5" diameter
SUSPENSION:		

Frame	Type	Ladder-type, single-channel, 36,000 psi steel (16,000-lb. to 22,000-lb. GVWR); 50,000 psi steel (24,000-lb., 26,000-lb. GVWR)
	Section modulus	9.46 cu. in.
Jounce Bumpers		Front, variable-rate
Springs, Front	Type	Parabolic leaf spring, single-stage, constant rate
	Rating @ ground (min.)	Refer to weight ratings for usage and ratings
Springs, Rear	Type	Parabolic leaf spring, single-stage, constant rate
	Rating @ ground (min.)	Refer to weight ratings for usage and ratings
Shock Absorbers	Gas-pressurized, front/rear	Sachs twin-tube
Stabilizer Bars		Front: Bar diameter 50.8 mm for all versions Rear: Bar diameter 50.8 mm for all versions
Track Bar		Front (standard on 18,000-lb. to 26,000-lb. GVWR; optional on 16,000-lb. GVWR)
TIRES:	Type	Steel-belted radial, highway, BSW
	Size	Six, 245/70R19.5G on 16,000-lb., 18,000-lb. GVWR and 20,500-lb. GVWR; six, 235/80R22.5G standard on 22,000-lb. GVWR (six, 245/70R19.5G optional); six, 255/80R22.5G on 24,000-lb. and 26,000-lb. GVWR
WHEELS:	Type and size	19.5" x 6.75" steel with 16,000-lb.–20,500-lb. GVWR, six, 8-hole disc, 22.5" x 7.5" with 22,000-lb., 24,000-lb., 26,000-lb. GVWR — polished aluminum front and outer rear with steelinner rear

(1) 210-amp output based on cold performance at 80º F. Actual output is temperature and application dependent.

NOTE: Includes Electronic Speed Control/Tilt Steering Wheel, Tachometer, 17.5" Black Urethane Steering Wheel, Trailer Tow Prep Wiring and Air Conditioning Prep Package (non-precharged). Shipped with a dunnage box that contains the following: Glove Compartment Bag, Tire Warranty and Warranty Facts Booklet, Incomplete Vehicle and owner's manual, Rating Plate, Instrument Cluster, Labels/Decals/Tags, Fuel Filler (Hose, Cap, Pipe Assembly, Support, Vent Hose), Fuel Tank Auxiliary Port Adapter, Wheel Nut Wrench (with spare tire option only), Horn Pad, Dual Electric Horns and Bracket Assembly, Headlamp Switch Assembly, Traction Control Switch, Hazard Switch, Sun Load Sensor, External Muffler Outlet Pipe and Clamp, V8 Engine Badge, A/C low pressure switch and O-Ring, Electrical Harness Jumper(s): Electric Brake Controls, Horn, Headlamp, ACC Feed, A/C, Rear Lamp External.

NOTE: Refer to weight ratings for standard weight rating specifications (GVWR/payload/GCWR and trailer weight/GAWR/base curb weight).

Front Axle Specifications

Type		**Forged I-beam**	
GVWR (lbs.)		16,000/18,000/20,500/22,000	24,000-26,000
Max. rating @ ground (lbs.)		8,000	9,000
Axle	Type	Monobeam	
	Material	Forged steel	
	Spring centers (in.)	41.87	38.88
Ball Joint		Zirked	
Spindle	Material	Nodular cast-iron body with forged steel stem	
Wheel bearings	Type	Tapered roller	

Rear Axle Specifications

GVWR (lbs.)		16,000/18,000	20,500	22,000	24,000/26,000
Make (standard)		Dana S110		Dana S130	Dana S140
Max. rating @ ground (lbs.)		11,000/12,000	13,500	15,000	17,500
Type		Full-floating			
Driveline attachment		1480			SPL90
Housing	Type	Banjo, cast carrier			
	Cover attachment	Welded			
Section	Arm dimensions (in.)	4.33 x 4.26	4.33 x 4.26		5.28 x 4.61
Synthetic lubricant capacity (pts.) approximate with hubs		13.6	13.6		21.0
Spring centers (in.)		42.48	42.48	42.48	42.48
Wheel bearings	Type	Tapered roller			
Gears	Type	Hypoid			
	Material	Alloy steel			
Ring gear	Pitch dia. (in.)	12.2	12.2		13.4
Pinion	Mounting	Overhung			
Differential	Type	2-pinion		4-Pinion	
Axle shaft	Spline minor dia. (in.)	1.56	1.56	1.61	1.81
	Spline major dia. (in.)	1.75	1.75	1.85	2.0
	No. of splines (hub end)	34	34	36	39

Hydraulic Brake Equipment Specifications — Front/Rear Disc

Type	Axle Usage (lbs.)	Rotor Diameter (in.)		Brake Lining Segment	Area (sq. in.)/ Width (in.)/ Thickness (in.)	Caliper Piston No. Dia. (in.)	Gross Lining Area per Axle (sq. in.)	Total Swept Area per Axle (sq. in.)
		OD	ID					
Front Disc	6500	15.0	10.12	Outboard	20.4/2.32/0.47	Dual/2.60	81.6	366.6
				Inboard	20.4/2.32/0.47			
	7,000	15.0	10.12	Outboard	20.4/2.32/0.47	Dual/2.60	81.6	366.6
				Inboard	20.4/2.32/0.47			
	7500	15.0	10.12	Outboard	20.4/2.32/0.47	Dual/2.60	81.6	366.6
				Inboard	20.4/2.32/0.47			
	8,000	15.0	10.12	Outboard	20.4/2.32/0.47	Dual/2.60	81.6	366.6
				Inboard	20.4/2.32/0.47			
	9,000	15.0	10.12	Outboard	20.4/2.32/0.47	Dual/2.87	81.6	366.6
				Inboard	20.4/2.32/0.47			
Rear Disc	12,000/13,500/ 15,000	15.0	10.12	Outboard	20.4/2.32/0.47	Dual/2.60	81.6	366.6
				Inboard	20.4/2.32/0.47			
	17,500	15.0	10.12	Outboard	20.4/2.32/0.47	Dual/2.60	81.6	366.6
				Inboard	20.4/2.32/0.47			

Brake Master Cylinder Specifications

Type	Usage	Bore Dia. (in.)
Dual system, dash-mounted	16,000-lb., 18,000-lb. GVWR	1.375
	20,500-lb., 22,000-lb., 24,000-lb., 26,000-lb. GVWR	1.63

Brake Booster Specifications

Make/Type	Usage	Booster Type	Boost Ratio
Dash-mounted	16,000-lb., 18,000-lb. GVWR	Hydro Boost	8.19
	20,500-lb., 22,000-lb., 24,000-lb., 26,000-lb. GVWR	Hydro Max	21.1

Cooling System Specifications

Engine	Cooling	Trans. Usage	Radiator								Fan Specifications		
			Frontal Area (sq. in.)	Core Size (in.)			Rows of Tubes	Fins Per Inch	Cooling System Capacity qts. (liters)	In-Tank Trans Cooler	Type	No. of Blades	Blade Dia. (in.)
				Height	Width	Thick.							
7.3L PFI Gas V8	Std	6-Speed	857	28.4	30.19	2.20	91	17.8	5.9 (5.6)	Std	Engine Driven	9	20.3

Auxiliary Automatic Transmission Oil Cooler Applications

Engine	Transmission	Cooler — No. of Plates
7.3L PFI Gas V8	6-speed automatic overdrive	31

Engine

Driveline Layout	Front Engine, Rear Wheel (RWD)
Engine Type	**7.3L PFI Gas V8**
Displacement (liters/cu. in.)	7.3/445
Horsepower @ rpm	350 @ 3,900
Torque (lb.-ft.) @ rpm	468 @ 3900
Compression ratio	10.5:1
Valvetrain	OHV
Valve operation	Push rod/rocker arms
Bore & stroke (in.)	4.21 x 3.98
Main bearings	5
Induction	Naturally aspirated
Fuel system	Port fuel injection
Fuel requirement (octane)	87 (min.)

2020 F53 Motorhome Specifications

Fuel System Data

Electronic Fuel Injection	Port fuel injection
Fuel Pump	Single electric-in-tank high pressure
Fuel Filter	In-tank large capacity (one)
Air Cleaner	Dry element, replaceable

2020 F53 Motorhome Specifications

Steering Specifications

Wheelbase (in.)	Power Steering[1]	Turning Diameter (ft.)		
	Gear Ratio	Curb-to-Curb		
		16,000–22,000-lb. GVWR w/19.5" wheels	22,000-lb. GVWR w/22.5" wheels	24,000–26,000-lb. GVWR w/22.5" wheels
158	18.4:1	45.4	—	—
178	18.4:1	49.7	—	—
190	18.4:1	52.2	—	—
208	18.4:1	56.1	63.7	—
228	18.4:1	60.3	68.6	60.6
242	18.4:1	63.3	72.0	66.8
252	18.4:1	—	—	69.5

(1) Power steering fluid cooler is standard.

Frame Specifications

Wheelbase (in.)	No. of Crossmembers	Maximum Side Rail Section[1] (Height x Width x Thickness) (in.)	Section Modulus (cu. in.)	16K–22K Yield Strength (psi)	24K–26K Yield Strength (psi)
158	7	9.16 x 3.00 x .025	9.46	36,000	—
178	7	9.16 x 3.00 x .025	9.46	36,000	—
190	7	9.16 x 3.00 x .025	9.46	36,000	—
208	8	9.16 x 3.00 x .025	9.46	36,000	—
228	9	9.16 x 3.00 x .025	9.46	36,000	50,000
242	9	9.16 x 3.00 x .025	9.46	36,000	50,000
252	9	9.16 x 3.00 x .025	9.46	—	50,000

(1) Measured to inside of metal.

Shock Absorber Specifications

Type	Usage	Front			Rear		
		No. Used	Piston Rod Dia. (mm)	Type	No. Used	Piston Rod Dia. (mm)	Type
Sachs twin-tube	Std.	2	15.0	Gas-pressurized	2	15.0	Gas-pressurized

Spring Specifications — Front Leaf

Combined Rating @ Ground (lbs.)	Number of Leaves	Total Thickness (in.)	Overall Length (in.)	Width (in.)	Deflection Rate[1] (lbs. per in./spring)
6,500	2	3.38	63.00	4.00	510
7,000	2	3.38	63.00	4.00	632
7,500	2	3.38	63.00	4.00	632
8,000	2	3.47	63.00	4.00	693
9,000	3	3.31	63.00	3.00	750

(1) Single-stage, constant rate springs.

Spring Specifications — Rear Leaf

Combined Rating @ Ground (lbs.)	Number of Leaves	Total Thickness (in.)	Overall Length (in.)	Width (in.)	Deflection Rate(1) (lbs. per in./spring)
11,000	3	3.88 (w/Spacer)	64.00	4.00	950
12,000	3	3.88 (w/Spacer)	64.00	4.00	952
13,500	3	2.44 (w/o Spacer)	64.00	4.00	1,350
15,000	3	2.48 (w/o Spacer)	64.00	4.00	1,547
17,500	4	3.31 (w/o Spacer)	64.00	4.00	1,546
24,000	4	3.31 (w/o Spacer)	64.00	4.00	1,701
26,000	4	3.31 (w/o Spacer)	64.00	4.00	1,850

(1) Single-stage, constant rate springs.

Tire Specifications

Size	Tread Type & Sidewall	Tire Man.	Rim Width (in.)	Section Width(1) (in.)	Ply/Load Rating	Inflation Press. (psi)	Load Limits @ Max. Inflation Press. (lbs.)	Static Loaded Radius (in.)	SAE Rev. per Mile @ 45 mph
245/70Rx19.5	Highway-BSW	Goodyear®	6.75	9.94	12/G	95(2)	3,890/3,655	15.30	633
235/80Rx22.5	Highway-BSW	Michelin®	7.5	9.2	14/G	90	4,140/3,765	17.40	556
255/80Rx22.5	Highway-BSW	Michelin	7.5	9.9	14/G	100	4,975/4,525	17.90	541

(1) Tire and rim maximum width.

(2) 16,000-lb. to 20,500-lb. GVWR = 82 psi, 20,500-lb. GVWR with 7,500-lb. FGAWR and 22,000-lb. GVWR = 95 psi.

Wheel Specifications

Wheel Type	Wheel Size	Nominal Offset (in.)	No. of Studs	Bolt Circle mm (in.)	Max. Wheel Capacity Load (lbs. @ ground)
Steel	19.5" x 6.75" RW	5.50	10	225 (8.85)	4,000
Alcoa DuraBright® Aluminum (Front/Outer Rear)	22.5" x 7.5" RW	6.28	8	275 (10.83)	7,300
Steel (Inner Rear)	22.5" x 7.5" RW	6.20	8	275 (10.83)	5,000

Automatic Transmission Specifications

Make/Type	6-Speed TorqShift Double Overdrive Automatic with Tow/Haul Mode
Ratios (to 1):	
1st	3.97
2nd	2.31
3rd	1.51
4th	1.14
5th	0.85
6th	0.67
Reverse	3.12
Converter torque ratio @ WOT stall	2.00
Fluid capacity (qts.)	19.0
Gearset	Helical
Oil cooler	Oil to air and in-tank
Oil filter	Internal
Converter size & type	12" PCM controlled clutch apply